

WHAT IS CLAIMED IS:

1. A system for location search of a data  
processing device including a wireless communications  
unit and a unit to output received radio wave  
5 information for location detection, the system  
comprising:

a unit which acquires the received radio wave  
information from the data processing device by wireless  
communications;

10 a location detection unit which calculates  
position coordinate information to specify a location  
of the data processing device based on the received  
radio wave information;

a region information database in which region  
15 information is stored to designate a spatial range  
associated with the position coordinate information;  
and

a search unit which searches the region  
information corresponding to the position coordinate  
20 information calculated by the location detection unit  
from the region information database.

2. The system according to claim 1, wherein the  
region information database stores the region  
information including space identification information  
25 to specify the spatial range associated with the  
position coordinate information, and

the space identification information includes

a space name allocated to the spatial range, and range identification information which identifies the spatial range set for each position coordinate information and which indicates the same content at a time when  
5 a plurality of spatial ranges specified by different position coordinate information are handled as the same spatial range.

3. The system according to claim 1, wherein the region information database stores space identification  
10 information which specifies the spatial range associated with the position coordinate information, and the region information including control information indicating a predetermined control process for each spatial range.

15 4. The system according to claim 1, wherein the region information database stores the region information including space identification information associated with the position coordinate information to identify the spatial range designated by a plane  
20 coordinate of two points in a three-dimensional space and a region in a vertical direction.

5. The system according to claim 1, further comprising;

a computer system which manages the location of  
25 the data processing device; and

means for transferring the position coordinate information calculated by the location detection unit

and region information searched by the search unit to the computer system.

6. The system according to claim 1, further comprising:

5           a computer system which manages a location of the data processing device; and

          means for transferring the position coordinate information and the region information to the computer system,

10           the computer system including:

          a unit which uses the position coordinate information and the region information to produce display information capable of confirming the location of the data processing device; and

15           a display device which displays the display information on a display.

7. The system according to claim 6, wherein the computer system includes a unit which produces map information to display a map including the location of the data processing device on the display, when the display device displays the display information on the display.

8. The system according to claim 1, wherein the region information database stores space identification information specifying the spatial range associated with the position coordinate information and the region information including control information indicating

a predetermined process for each spatial range,

the system further comprising:

a computer system which manages the location of  
the data processing device; and

5 means for transferring the position coordinate  
information and the region information to the computer  
system,

the computer system including:

a unit which uses the position coordinate  
10 information and the region information to produce  
display information capable of confirming the location  
of the data processing device;

a display device which displays the display  
information on a display; and

15 a controller which executes a predetermined  
process set for each spatial range corresponding to the  
location of the data processing device in accordance  
with the control information.

9. The system according to claim 8, wherein the  
20 controller executes a control so as to prohibit the  
display information from being displayed or to change  
the display information to a predetermined content,  
when the control information indicates the display  
prohibition or the change of the display information.

25 10. The system according to claim 1, further  
comprising:

a controller which executes a predetermined alarm

process, when control information indicates an alarm.

11. The system according to claim 1, wherein the region information database stores the region information including space identification information specifying the spatial range associated with the position coordinate information,

the space identification information includes:

a space name allocated to the spatial range;  
range identification information which identifies the spatial range set for each position coordinate information and which indicates the same content, when a plurality of spatial ranges specified by different position coordinate information are treated as the same spatial range; and  
entrance/exit information indicating a position coordinate of an entrance/exit with respect to the spatial range.

12. The system according to claim 1, wherein the region information database stores space identification information specifying the spatial range associated with the position coordinate information, and the region information including entrance/exit information indicating a position coordinate of an entrance/exit with respect to the spatial range, and

the search unit includes movement detection means for detecting that the data processing device has moved in different spatial ranges based on the position

coordinate information calculated by the location  
detection unit, and

ignores the movement by the movement detection  
means as an error, when searching the region  
5 information from the region information database based  
on the position coordinate information calculated by  
the location detection unit, and judging that the data  
processing device has moved in the different spatial  
ranges through the range other than the entrance/exit  
10 indicated by the entrance/exit information.

13. The system according to claim 1, further  
comprising:

a schedule information management unit which  
stores schedule information including a use time  
15 corresponding to the spatial range, wherein the search  
unit judges whether or not the position coordinate  
information is an error based on the schedule  
information, and corrects the position coordinate  
information in a case in which the judgment result is  
20 the error, when searching the region information from  
the region information database based on the position  
coordinate information calculated by the location  
detection unit.

14. A method of location search of a data  
25 processing device including a wireless communications  
unit and a unit to output received radio wave  
information for location detection, the method

comprising:

calculating position coordinate information to  
specify a location of the data processing device based  
on the received radio wave information acquired from  
5 the data processing device by wireless communications;  
and

referring to a region information database in  
which region information is stored to designate a  
spatial range associated with the position coordinate  
10 information, and searching the region information  
corresponding to the position coordinate information  
from the region information database.

15. A method according to claim 14, further  
comprising:

15 transferring the position coordinate information  
and the region information to a computer system which  
manages the location of the data processing device.

16. A method according to claim 15, wherein the  
region information database stores space identification  
20 information to specify the spatial range associated  
with the position coordinate information, and the  
region information including control information  
indicating a predetermined control process for each  
spatial range, and

25 the computer system uses the position coordinate  
information and the region information to display  
information capable of confirming the location of

the data processing device on a display, and

executes a predetermined process set for each spatial range corresponding to the location of the data processing device in accordance with the control

5 information.

17. A method according to claim 14, wherein the region information database stores space identification information to specify the spatial range associated with the position coordinate information, and the  
10 region information including entrance/exit information indicating a position coordinate of an entrance/exit with respect to the spatial range,

the method further comprising:

detecting that the data processing device has  
15 moved in different spatial ranges based on the position coordinate information; and

ignoring the movement as an error, when searching the region information from the region information database based on the position coordinate information  
20 and judging that the data processing device has moved in the different spatial ranges through a range other than the entrance/exit indicated by the entrance/exit information.

18. A method according to claim 14, further  
25 comprising:

disposing a schedule information management unit storing schedule information including a use time



corresponding to the spatial range to judge whether or not the position coordinate information is an error based on the schedule information; and

5       correcting the position coordinate information based on the schedule information in a case in which the judgment result is the error.